

## ABSTRACT OF THE DISCLOSURE

The present invention relates to methods of genetic analysis for the classification, diagnosis and prognosis of acute myeloid leukemia (AML). The invention provides a method for producing a classification scheme for AML comprising the steps of a) providing a plurality of reference samples, the reference samples comprising cell samples from a plurality of reference subjects affected by AML; b) providing reference profiles by establishing a gene expression profile for each of the reference samples individually; c) clustering the individual reference profiles according to similarity; and d) assigning an AML class to each cluster. The invention further relates to a method for classifying the AML of an AML-affected subject, to a method for diagnosing AML in a subject, and to a method of determining the prognosis for an AML-affected subject.